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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,028	03/17/2004	Takeshi Katayama	62807-174	3467

7590 01/24/2006

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Washington, DC 20005-3096

EXAMINER

REHM, ADAM C

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/802,028		KATAYAMA ET AL.	
	Examiner		Art Unit	
	Adam C. Rehm		2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/17/04; 8/18/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, (1) the fan arranged above the light bulb; and (2) a fan situated laterally of the light bulb must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by ITO ET AL. (US 6,558,004), which discloses a projection type display unit (1) comprising:

- A light source unit (1);
- A first cooling fan that cools the light source unit (55, Column 8, Line 66-Column 9, Line 6);
- A light bulb that modulates beams of light from the light source unit (411);
- A second cooling fan that cools the light bulb and then cools an electric power source (Column 8, Lines 28-36 disclose a sirocco fan 52 that cools lamp 411; Column 8 Lines 53-61 disclose the fan 52 that cools the electric power-supply/source 35);
- A projection lens for projecting the modulated beams of light (46/414);
- A first cooling wind path provided by the first cooling fan and a second cooling wind path provided by the second cooling fan are substantially independent of each other (Column 9, Lines 7-53; as provided above, a plurality of fans are used to cool a plurality of parts, thus utilizing substantially independent cooling paths);

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- Polarization converting elements cooled by a sirocco fan (415, Column 8, Line 66-Column 9, Line 6); and
- A duct that constitutes a wind path for cooling wind (37, Column 8, Lines 41-48).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2 and 4-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over ITO ET AL. (US 6,558,004) as applied to claim 1 above. ITO discloses the invention as claimed, but does not specifically disclose the arrangement as claimed by applicant. Specifically, ITO does not disclose the arrangement of an air intake port, the light bulb, a cooling fan and an electric power source with the bulb arranged on an air intake side of the fan and the power source arranged on the exhaust side with the fan below or above the bulb, the intake port above or below the bulb. Moreover, while ITO discloses a fan for cooling a polarization conversion element (Column 8, Line 66-Column 9, Line 6), ITO does not disclose a fan that cools both the conversion element and the power source.

4. Notably, Applicant's claim for patentability is based on a particular arrangement of known parts. It has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70. It is known that when a single fan

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cools a number of parts arranged along a single air path, the air along the air path increases in temperature exponentially as each part is cooled. Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and rearrange the existing parts of ITO in order of importance, by heat generated or susceptibility to heat with the lamp being situated in the closest possible proximity to a vent and cooled first, the fan being sufficiently situated near the vent to generate air flow past the lamp and the power source being cooled thereafter. Likewise, it would have been obvious to one of ordinary skill in the art at the time of invention to modify ITO and use a single fan to cool the power source and polarization element in order to render the projector unit smaller and lower the cost of manufacturing. Moreover, it has been held that omission of an element and its function in a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. TIAO (US 6,582,082) discloses a projector with a fan to cool both a projector lamp and power supply unit.

Correspondence


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam C. Rehm whose telephone number is 571.272.8589. The examiner can normally be reached on M-F 9-5:30 EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571.272.2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACR
1/20/2006



ALAN CARIASO
PRIMARY EXAMINER